

DOWN/UPCONVERSION MIXER FOR DIRECT CONVERSION RADIOS

ABSTRACT OF THE DISCLOSURE

A RF down/up-conversion circuit comprising: 1) a local oscillator chopping circuit comprising: a) a frequency divider circuit for receiving a first local oscillator (LO) signal having a frequency of LO and generating a frequency-divided second local oscillator (LO) signal having a frequency of LO/N and synchronized with the first LO signal; and b) a multiplier for receiving the first and second LO signals and generating a product signal of the first and second LO signals; and 2) a differential radio frequency (RF) mixer having a first differential input port for receiving the product signal from the multiplier and a second differential input port for receiving a first differential modulated radio frequency (RF) signal and a second differential modulated radio frequency (RF) signal, wherein the differential RF mixer generates a differential output signal.